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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,771	03/15/2004	Soo Cho	P4066/DOOS	8632
41943	7590	02/20/2007	EXAMINER	
GWIPS PETER T. KWON P.O. BOX 231630 CENTERVILLE, VA 20120			KWIECINSKI, RYAN D	
			ART UNIT	PAPER NUMBER
			3635	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/20/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/799,771

Applicant(s)

CHO ET AL.

Examiner

Ryan D. Kwiecinski

Art Unit

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Claims 1-6 have been examined in this Office Action.

#### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: The double layer glass (3) is not labeled in the drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

Claim 4 is objected to because of the following informalities:

Claim 4 recites the limitation "the solar battery module" in line 4.

There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,144,017 to Millett et al. in view of US 3,710,074 to Stewart.**

**Claim 1:**

Millett et al. teaches a sash for windows and doors (26, Fig.2) provided with an anti-dewing hot wire (50, Fig.3), in which a double-layered glass (34,36, Fig.3), including an indoor sheet of glass (34, Fig.3) and an outdoor sheet of glass (36, Fig.3) spaced from each other by a spacer (Column 10, lines 16-17), is fixedly installed on a sash frame (32, Fig.2) including a plurality of frame members (stiles and rails, Fig.2; Column 10, lines 13-14), each of which is provided with a reception groove (section of frame above the protrusions receives the frame, Fig.3) formed in one surface thereof and a hollow formed therein (space beneath the upper protrusions, Fig.3), and an edge of the double-layered glass is sealed with a sealant (Column 10, lines 16-17), comprising:

a hot wire (50, Fig.3) for generating heat by means of supplied power, attached along an edge of the inner surface of the indoor sheet of glass (34, Fig.3) of the double-layered glass,

a through hole (98, Fig.3) for passing an electric wire electrically connected to the hot wire, formed through a designated portion of the spacer (rectangular piece inserted between glass panes, Fig.3) located on lower portions of the indoor and outdoor sheets of glass of the double-layered glass, and

a controller (30, Fig.2), which is connected to the electric wire (96, Fig.3) for controlling the output of a power supply unit for supplying a driving voltage to the hot wire according to a user's manipulation signal, located in the hollow of a lower frame of the sash frame.

Millett et al. does not teach the spacer filled with a desiccant, but Stewart teaches the spacer filled with a desiccant (23, Fig.1). It would have been obvious at the time of the invention to one of ordinary skill in the art to have filled Millett's spacer with a desiccant in order to prevent the presence of moisture inside of the sealed glass system. The use of desiccants in sealed glass panels is notoriously well known in the art.

**Claim 3:**

Millett et al. and Stewart teach the sash set forth in claim 1, Millett et al. teaches wherein the power supply unit (46, Fig.2) includes a connector (48,

Art Unit: 3635

Fig.3) located at one side of the sash frame, which is electrically connected to an input terminal (94, Fig.3) of the controller and corresponds to a terminal of a cable so that utility power is applied to the connector through the cable.

**Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,144,017 to Millett et al. in view of US 3,710,074 to Stewart in view of US 6,660,968 B1 to Mottelet et al.**

**Claim 2:**

Millett et al. and Stewart teach the sash as set forth in claim1, but they do not teach further comprising a surface temperature sensor for sensing the surface temperature of the indoor sheet of glass attached to the surface of the indoor sheet of glass, and a rated controller for comparing the surface temperature input from the surface temperature sensor to the current dew point temperature of the atmosphere, which is already stored in the rather controller, installed in the controller.

Mottelet et al. teaches further comprising a surface temperature sensor for sensing the surface temperature of the indoor sheet of glass attached to the surface of the indoor sheet of glass, and a rated controller for comparing the surface temperature input from the surface temperature sensor to the current dew point temperature of the atmosphere, which is already stored in the rather controller, installed in the controller (Column 3, lines 30-59; Column 4, lines 4-8).

Art Unit: 3635

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the temperature sensors from Mottelet's circuit in the environment of Millett's insulated glass unit, in order to automatically control the condensation system. The use of temperature sensors, which trigger controllers, on glass panes is notoriously well known in the art.

### ***Allowable Subject Matter***

Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan D. Kwiecinski whose telephone number is (571)272-5160. The examiner can normally be reached on Monday - Friday from 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Friedman can be reached on (571)272-6842. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3635

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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